

Al-Hussein Bin Talal University

Engineering Collage

Department of Electrical Engineering

0508592 – Graduation Project

**PROJECT TITLE**

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**Supervised By**

**Dr. FirstName Initial LastName**

Submitted as Partial Fulfillment of the Requirements for the Bachelor's Degree of Electrical Engineering

# ACKNOWLEDGMENT

Use this section to acknowledge the contribution of different people to your work; these may include your supervisor(s), industry partners, sponsors, financial support, specific faculty members in your department, and even your family.

# DECLARATION

I hereby certify that this material, which I now submit for assessment on the programme of study leading to the award of Bachelor of Electrical Engineering, is entirely our own work, that we have exercised reasonable care to ensure that the work is original, and does not to the best of my knowledge breach any law of copyright, and has not been taken from the work of others save and to the extent that such work has been cited and acknowledged within the text of my work.

**Signed:** (all student sign here)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Date:** (Day, xx Month Year).

# ABSTRACT

The report must begin with a one- to two-paragraph abstract (max 350 words) that orients the reader as to the contents as well as to the major sections of the report. The abstract, by itself, must provide enough information about the project so that the reader can judge simply by reading this portion if he or she wants to read further.

For example, as an abstract for this document, this document has been prepared by the College of Engineering and Technology to help Undergraduate students in preparing their final year project report. The document presents a general outline for these documents as well as the formatting that students must abide to. Also, the exact method for citation and referring to literature related to your work is detailed.

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**Chapter One**

# Introduction

This document was developed in order to standardize the method of writing final year projects and to fulfill the requirements for the accreditation and the basic criteria required for the preparation of the projects are as listed below:

1. The projects should not be dependent on internet information.
2. Images/figures … etc. should be referenced.
3. The experimentation, if any, should be subject to review of the work done, results obtained, implications, conclusions, reflections … etc.
4. The text format should be consistent between chapters and the standard of English used in the text should not be varied.
5. The project should contain strong elements of Design and Analysis activity, experimental work where appropriate, manufacturing elements as appropriate and include some business decisions such costing … etc.
6. The literature review should not be more than an account of the work undertaken by students.
7. The conclusions should not be very short.

The details of how to format your document correctly and how to include your citations and references are given in the following chapters of this document.

**Chapter Two**

# formatting description

The physical layout and formatting of your final year project report is highly important, yet is very often neglected. A tidy, well laid-out and consistently formatted document makes for easier reading and is suggestive of a careful and professional attitude towards its preparation.

In effect, this document has been developed to give you the guidelines for preparing reports for your final year project. Use this document as a template if you are using Microsoft Word 6.0 or later. Otherwise, use this document as an instruction set.

## Title Page

Please set up your cover page so that the information listed below is visible through the window of the front cover page of your project and in the correct format. The title page should contain the following:

* **Al-Hussein Bin Talal University logo:** the logo should be centered and on top of the page with a size of 3.25 cm x 3.25 cm.
* **The Al-Hussein Bin Talal University title:** this should be in Times New Roman, bold, 18 pt., title case, centred, single line spacing, with 18 pt. spacing before and 72 pt. spacing after.
* **College title:** this should be in Times New Roman, bold, 16 pt., title case, centred, single line spacing, with 0 pt. spacing before and 0 pt. spacing after.
* **Your department title:** this should be in Times New Roman, bold, 16 pt., title case, centred, single line spacing, with 18 pt. spacing before and 48 pt. spacing after.
* **Project degree:** this should be in Times New Roman, regular, 14 pt., title case, centred, single line spacing, and no paragraph spacing.
* **Project title:** this should be in Times New Roman, bold, 16 pt., all caps, centred, single line spacing, with 72 pt. spacing before and 18 pt. spacing after.
* **Project subtitle:** this should be in Times New Roman, bold, 16 pt., title case, centred, single line spacing, and 48 pt. spacing after.
* **Presented by, student name, supervised by, and supervisor(s) name:** this should be in Times New Roman, regular (names in italic), 14 pt., title case, centred, single line spacing, and 24 pt. spacing after.
* **Month – Year**: this should be in Times New Roman, regular, 10 pt., Title case, centered, footer text with no spacing before or after.

It should be noted that setting the line spacing and the spacing between different paragraphs is accessed from the format menu, in MS Word, by selecting “Paragraph…”.

## General Project Layout

The report should contain the following components:

1. Title or Cover Page.
2. Acknowledgements (Optional).
3. Declaration.
4. Abstract: a short summary of the project.
5. Table of Contents, List of Figures, List of Tables, and List of Acronyms/ Abbreviations.
6. Chapters

* Chapter 1, which would be an introduction to the work. A 'Funnel' approach which begins broadly within the topic and concludes the chapter with; focus on what this thesis delivers, and where to find it in the other Chapters.
* Chapter 2 is information gathering or literature review.
* Chapter 3, 4 and 5 (and more if needed) would be specific work carried out and appropriately collated to read well.
* Chapter 6 would be overall Discussion and review/reflection on achievements.
* Chapter 7 would be Conclusions.
* Chapter 8 a small Chapter of Future Work, indicating a jumping off point for the next investigator.

1. References.
2. Appendices (optional).

## Page and Text Setting

Your project report should be printed (single sided) on good quality A4 paper. Project reports should be thermal-bound. Page should be set-up as shown in Figure ‎2‑1. The minimum number of pages for final year project reports is 50 pages (main report chapters only). Remember that quantity does not automatically guarantee quality; a 150 page report is not twice as good as a 75-page one.

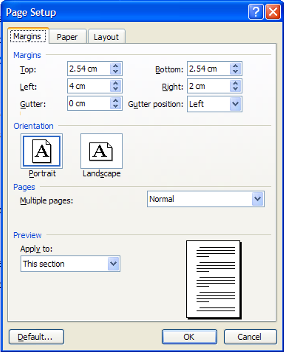


Figure ‎2‑1: Page settings.

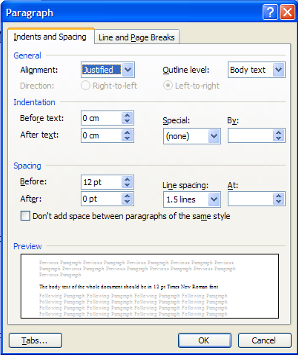


Figure ‎2‑2: Paragraph settings.

The body text of the whole document should be in 12 pt Times New Roman font, justified alignment, no indentation for first line in paragraphs, spacing before paragraphs 12 pt, and line spacing set at 1.5 lines; as shown in Figure ‎2‑2.

### Sub-Heading Level 1

There are different headings and sub-headings that you may find useful in organizing your report; these are summarised in Table ‎2‑1.

Table ‎2‑1: List of headings and their formatting.

|  |  |  |
| --- | --- | --- |
| Style Name in Template | Used for | Format |
| Chapter Label | Chapters labelling | Times New Roman, Italic, 14 pt., expanded by 3.5, centred, space after: 24 pt., and page break before. |
| Heading 1 | Chapter title | Times New Roman, bold, 16 pt., all caps, centred, space before: 12 pt., space after: 36 pt., and outline numbered at level 1. |
| Heading 2 | Main headings | Times New Roman, bold, 14 pt., all caps, aligned to the left, space before: 18 pt., space after: 12 pt., and outline numbered at level 2. |
| Heading 3 | Sub-headings level 1 | Times New Roman, bold, 14 pt., title case, aligned to the left, space before: 12 pt., space after: 12 pt., and outline numbered at level 3. |
| Heading 4 | Sub-headings level 2 | Times New Roman, bold, 13 pt., title case, aligned to the left, space before: 12 pt. and space after: 12 pt. |
| Heading 5 | Sub-headings level 3 | Times New Roman, underlined, 12 pt., title case, aligned to the left, space before: 12 pt. and space after: 12 pt. |

## Figures and Tables

Use the word “Figure” (“Table”) even at the middle of a sentence when referring to a figure (Table) in text and make sure that all figures and tables are referred to. If your figure has two parts, include the labels “(a)” and “(b)” as part of the figure itself (do not use two different captions for each figure). Please verify that the figures and tables you mention in the text actually exist.

Do not put borders around the outside of your figures. *Do not use color unless it is necessary for the proper interpretation of your figures*. When re-sizing your figures, make sure that you use the same percentage for your figures height and width.

Use Times New Roman, 12 pt., aligned to the left, single line spacing and with space before: 6 pt. and space after: 6 pt. The style defined in this template for the text used in tables is “Body Text (Tables)”.

### Figure Captions and Table Titles

Place figure captions below the figures; place table titles above the tables. Figure labels should be in Times New Roman, bold, 10 pt., and centered with 6 pt. spacing before and 24 pt. spacing after. Table titles should be in Times New Roman, bold, 12 pt., and left aligned with 12 pt. spacing before and 12 pt. spacing after.

The style defined for figure captions in the template is “Caption” and for table titles is “Table Caption”.

### Numbering of Figures and Tables

All figures and tables must be numbered in their order of appearance in text. Also, the chapter number must be included in the numbering with a hyphen separating the chapter number and the figure/table number in that chapter. This is set through the caption dialogue box in MS Word as shown in Figure ‎2‑3.

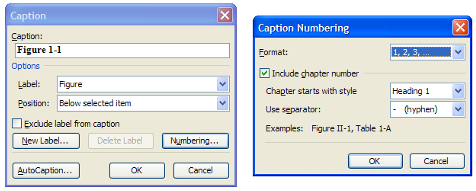


Figure ‎2‑3: Setting caption numbering to include chapter number.

### Referring to Figures and Tables in Text

When referring to figures and tables in your text you can use “Figure 1-1 shows…”, “as shown in Figure 1-1”, “(Figure 1-1)”, or “Table 1-1”.

The Cross-reference feature in MS Word can be used to insert references to figures, tables, and even different sections of your report. This feature is accessed through the “Insert” menu – “Reference” – “Cross-reference…”; leading to the dialogue box shown in Figure ‎2‑4.

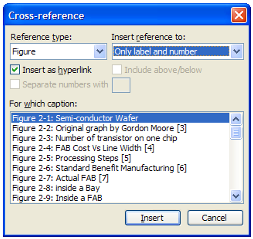


Figure ‎2‑4: Using Cross-reference.

## General Recommendations

### Units

Using SI units as primary units are strongly encouraged. English units may be used as secondary units (in parentheses). An exception is when English units are used as identifiers in trade, such as “3½ in disk drive.” Avoid combining SI and English units, as this often leads to confusion because equations do not balance dimensionally. If you must use mixed units, clearly state the units for each quantity in an equation.

### Abbreviations and Acronyms

Define abbreviations and acronyms the first time they are used in the text, even after they have already been defined in the abstract. Abbreviations such as SI, ac, and dc do not have to be defined. Abbreviations that incorporate periods should not have spaces: write “C.N.R.S.,” not “C. N. R. S.” Do not use abbreviations in the title unless they are unavoidable.

### Equations

Number equations consecutively with equation numbers in parentheses flush with the right margin, as in (1). First use the equation editor to create the equation. Then select the “Equation” mark-up style. Press the tab key and write the equation number in parentheses. Use parentheses to avoid ambiguities in denominators. Punctuate equations when they are part of a sentence, as in

 (1)

Be sure that the symbols in your equation have been defined before the equation appears or immediately following. Refer to equations as “Equation (1) is…”; even if it is in the middle of a sentence.

### Other Recommendations

Use one space after periods and colons. Hyphenate complex modifiers: “zero-field-cooled magnetization.” Avoid dangling participles, such as, “Using (1), the potential was calculated.” [It is not clear who or what used (1).] Write instead, “The potential was calculated by using (1),”

Use a zero before decimal points: “0.25,” not “.25.” Use “cm3,” not “cc.” Indicate sample dimensions as “0.1 cm × 0.2 cm,” not “0.1 × 0.2 cm2.”

Do not mix complete spellings and abbreviations of units: use “Wb/m2” or “webers per square meter,” not “webers/m2.”

When expressing a range of values, write “7 to 9” or “7-9,” not “7~9.”

A parenthetical statement at the end of a sentence is punctuated outside of the closing parenthesis (like this). (A parenthetical sentence is punctuated within the parentheses.) In American English, periods and commas are within quotation marks, like “this period.” Other punctuation is “outside”!

Avoid contractions; for example, write “do not” instead of “don’t.”

The serial comma is preferred: “A, B, and C” instead of “A, B and C.”

If you wish, you may write in the first person singular or plural and use the active voice (“I observed that ...” or “We observed that ...” instead of “It was observed that ...”). However, passive voice is preferred.

Remember to check spelling.

**Chapter Three**

# citation and referencing

Presented By:-

1. Student name
2. Student name

The report should be based on the student’s own work and in case of using any parts or copying any figures or diagrams from previous work this should be properly referenced according to the format explained below.

A numbered list of references must be provided at the end of the paper. The list should be arranged in the order of citation in text, not in alphabetical order. List only one reference per reference number.

Each reference number should be enclosed by square brack­ets. In text, citations of references may be given simply as “in [1] . . .” rather than as “in reference [1] . . .” Similarly, it is not necessary to mention the authors of a reference unless the mention is relevant to the text. It is almost never useful to give dates of references in text. These will usually be deleted by Staff Editors if included.

Footnotes or other words and phrases that are not part of the reference format do not belong on the reference list. Phrases such as “For example,” should not introduce references in the list, but should instead be given in parentheses in text, followed by the reference number, i.e., “For example, see [5].”

## References Format

Sample correct formats for various types of references are as follows.

Books:

1. G. O. Young, “Synthetic structure of industrial plastics,” in *Plastics*, 2nd ed., vol. 3, J. Peters, Ed. New York: McGraw-Hill, 1964, pp. 15–64.
2. W.-K. Chen, *Linear Networks and Systems*. Belmont, CA: Wadsworth, 1993, pp. 123–135.

Periodicals:

1. J. U. Duncombe, “Infrared navigation—Part I: An assess­ment of feasibility,” *IEEE Trans. Electron Devices*, vol. ED-11, pp. 34–39, Jan. 1959.
2. E. P. Wigner, “Theory of travelling-wave optical laser,” *Phys. Rev.*, vol. 134, pp. A635–A646, Dec. 1965.
3. E. H. Miller, “A note on reflector arrays,” *IEEE Trans. Antennas Propagat.*, tobe published.

Articles from Conference Proceedings (published):

1. D. B. Payne and J. R. Stern, “Wavelength-switched pas­sively coupled single-mode optical network,” in *Proc. IOOC-ECOC*, 1985, pp. 585–590.

Papers Presented at Conferences (unpublished):

1. D. Ebehard and E. Voges, “Digital single sideband detec­tion for interferometric sensors,” presented at the 2nd Int. Conf. Optical Fibre Sensors, Stuttgart, Germany, 1984.

Standards/Patents:

1. G. Brandli and M. Dick, “Alternating current fed power supply,” U.S. Patent 4 084 217, Nov. 4, 1978.

Technical Reports:

1. E. E. Reber, R. L. Mitchell, and C. J. Carter, “Oxygen absorption in the Earth’s atmosphere,” Aerospace Corp., Los Angeles, CA, Tech. Rep. TR-0200 (4230-46)-3, Nov. 1968.

## References to Electronic Sources

The guidelines for citing electronic information as offered below are a modified illustration of the adaptation by the International Standards Organization (ISO) documentation sys­tem and the American Psychological Association (APA) style. Three pieces of information are required to complete each reference: 1) protocol or service; 2) location where the item is to be found; and 3) item to be retrieved. It is not necessary to repeat the protocol (i.e., http) in Web addresses after “Available” since that is stated in the URL.

Books:

1. J. Jones. (1991, May 10). *Networks*. (2nd ed.) [Online]. Available: <http://www.atm.com>

Journals:

1. R. J. Vidmar. (1992, Aug.). On the use of atmospheric plasmas as electromagnetic reﬂectors. *IEEE Trans. Plasma Sci.* [Online]. *21(3)*, pp. 876–880. Available: <http://www.halcyon.com/pub/journals/21ps03-vidmar>

Papers Presented at Conferences:

1. PROCESS Corp., MA. Intranets: Internet technologies deployed behind the firewall for corporate productivity. Presented at INET96 Annu. Meeting. [Online]. Available: <http://home.process.com/Intranets/wp2.htp>

Reports and Handbooks:

1. S. L. Talleen. (1996, Apr.). The Intranet Ar­chitecture: Managing information in the new paradigm. Amdahl Corp., CA. [Online]. Available: <http://www.amdahl.com/doc/products/bsg/intra/infra/html>

Computer Programs and Electronic Documents:

1. A. Harriman. (1993, June). Compendium of genealog­ical software. *Humanist*. [Online]. Available e-mail: HUMANIST@NYVM Message: get GENEALOGY REPORT